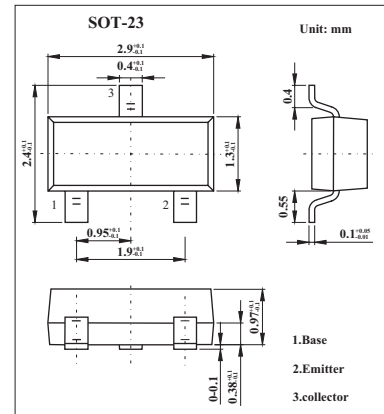


## Silicon NPN Epitaxial

### 2SC2716

#### ■ Features

- Low noise figure: NF = 3.5dB (max) (f = 1 MHz).



#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	35	V
Collector-emitter voltage	V <sub>CEO</sub>	30	V
Emitter-base voltage	V <sub>EB0</sub>	4	V
Collector current	I <sub>C</sub>	100	mA
Emitter current	I <sub>E</sub>	-100	mA
Collector power dissipation	P <sub>C</sub>	150	mW
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature range	T <sub>stg</sub>	-55 to +125	°C

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 20 V, I <sub>E</sub> = 0			0.1	μA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 2 V, I <sub>C</sub> = 0			1.0	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 12 V, I <sub>C</sub> = 2 mA	40		240	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA			0.4	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA			1.0	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 2 mA	80	120		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f = 1 MHz		2.2	3.0	pF
Collector-base time constant	C <sub>c.rbb'</sub>	V <sub>CE</sub> = 10V, I <sub>E</sub> = -1 mA, f = 30 MHz		30	50	ps
Power gain	G <sub>pe</sub>	V <sub>CC</sub> = 10V, I <sub>E</sub> = -1 mA, f = 1 MHz, R <sub>g</sub> =50Ω		2.0	3.5	dB

#### ■ hFE Classification

Marking	FR	FO	FY
hFE	40~80	70~140	120~240